ARTICLE XII. *Elements of the Practice of Physic, presenting a view of the present state of Special Pathology, and Therapeutics.* By DAVID CRAIGIE, M. D. F. R. S. E. Vol. I. 8vo. Edinburgh, 1836. pp. 952.

THE most valuable, and enduring medical books are undoubtedly those written by men of strong natural powers of observation, who write from the fulness of their own minds, and describe in plain forcible terms, with brevity, and conciseness, what they have seen, and experienced. Such are the writings of Hippocrates, of Sydenham, and of John Hunter; to which may be added, the more modern works of Sir Astley Cooper, Arbernethy, &c. The few books we have of this kind may be considered as the diamonds of medical literature. These works are durable, because they delineate facts; they describe the phenomena of nature, and nature is always the same. The empirics are, therefore, better writers than the rationalists; at least, their productions have a more permanent value.

But such men being seldom voluminous writers, and having rarely leisure, or inclination to commit to paper the results of their labours and observations, much of the most valuable part of medical experience perishes with those who possess it. The medical community is, therefore, the more indebted to those who will undertake the task of compiling and collecting from the depths of the wide sea of medical literature, whatever is truly valuable.

For having undertaken, and still more for the manner in which he has accomplished, this labour Dr. Craigie is entitled to our gratitude. His work is the most extensive general treatise, that has appeared since that of Dr. Good. The first volume contains 952 closely printed pages, and is confined entirely to the subjects of fever, and inflammation.

The volume bears the appearance of very great labour, and research. The author professes it to be his object, not to give his own opinions upon the various diseases treated upon; but to bring into "one uniform, harmonious, and comprehensive system, the whole of the theoretical principles, and the practical applications, of which the art of preventing, and of curing diseases, now consists." He aims at collecting, and arranging, in a work of moderate compass, the most material points in special pathology, and therapeutics, with the various facts on which they rest; in order to facilitate the labour of the student, and the younger members of the profession. It has been his design also, to reconcile the differences of opinion among different observers—to examine, compare, and analyse, the facts, and classes of facts, recorded by them, and endeavour to reconcile their discrepancies by the result of the labours of others, or by his own experience, and to deduce correct and legitimate principles from the whole.

In his Introduction, the author defines disease, as consisting in impaired action, or disordered function of the body. Functional derangement very often depends upon change of structure. Each function consists of distinct actions; each action, is performed by one or more organs constructed for the purpose, and each organ consists of certain elementary tissues, each of which possesses a definite arrangement of its minute particles, or constituent atoms, and is endowed with certain physical, and vital, or physiological properties. Every derangement of function, depends on the derangement of some of its constituent actions. It is doubtful whether any action can be deranged without some change in the properties of the elementary tissue; and how far these properties can be changed without a change in the elementary atoms, which constitute the intimate structure of the organs.

Every disease is probably, at its commencement, a dynamic affection only, and consists entirely of some preternatural change in the properties of some of the organic systems or tissues. In all cases, dynamic changes may be said to terminate in organic changes. Organical changes may be traced to functional lesions. Conversely, an organic change originated by a functional lesion, re-acts upon the latter, and increases it. Every disease presents two orders of objects; one of deranged function, the other of deranged structure. The latter are called diseases, the former symptoms. To form from external signs, &c., an accurate knowledge of the nature, and extent of the morbid action, is the object of pathology. Our author points out the extensive meaning of this word; that it is not confined to anatomical appearances, though it has come to be used more particularly with regard to them. But chemical, and physiological pathology, are full as important as anatomical. Anatomical examinations can show only the effects of morbid actions, not the actions themselves. By connecting, however, these effects with the symptoms observed in the living body, and with the morbid changes observed in the actions, and functions, and occasionally in the secretions, we are enabled to arrive at the most precise knowledge of which we are capable with regard to disease. In some diseases, no lesions are discoverable after death, and in these, the greatest obscurity prevails.

Morbid processes differ; 1st. In the nature of the process itself. 2dly. In the acute, subacute, or chronic nature of the morbid process. 3dly. In the simplicity or complication of the morbid action.

In regard to the classification of diseases, none has yet been made which is not liable to serious objections; none which meets with universal acceptation. It would seem to be much the best plan, therefore, either to abandon classifications altogether, or to adopt one that has been generally received, and endeavour to remove what there is in it erroneous, rather than to adopt a new system. The mental habits of men are so various, that no classification is likely to be fitted for all. Every active thinker, or inquirer, will be likely to form a classification for himself. It would, however, be a desideratum, to have an uniform order for the arrangement of diseases; and were it generally adopted, it would matter little upon what principles it was founded. There is little danger in these days, that propinquity in arrangement will lead to the uniformity of treatment of different diseases.

Upon the ground alluded to, however, that it is most natural for every man to adopt his own classification, we cannot deny to a lecturer, the privilege of treating diseases in the order most agreeable to himself; and this is the manner in which our author was led to the arrangement he has adopted. It must be allowed also, that in these days, when so much attention is universally paid to the subject of pathology, an arrangement founded upon the changes of function and structure produced by disease, is the most natural.

Our author commences with fever. This term, he says, is employed to denote that condition of the human body, in which there is an obvious and unusual increase of heat, and unnatural quickness of the pulse, with disorder more or less general of several functions. It is primary or secondary, idiopathic or symptomatic, simple or complicated. Dr. C. alludes to the opinion held by Autenreith, Clutterbuck, Mills, and Broussais, that fever never occurs without some local affection. This, he says, is not inconsistent with the existence of idiopathic fever. In most cases, whatever be the form or type the fever takes, an affection of some organ or tissues actually occurs, to a greater or less extent. The manner in which the local affection takes place, is not favourable to the opinion that it is the material cause or agent; since it generally follows the fever, and ceases when it subsides. In other respects, Dr. C. considers this an hypothesis which cannot claim any other denomination, than a mere admission of the difficulty of accounting for the morbid process in which fever consists. The opinions of our author are in fact, as we shall see hereafter, that all fever is in its origin idiopathic, and that the lesions found after death are the consequences, and not the causes of febrile action.

He commences with intermittent fever. In regard to the etiology of this affection, after a full exposition and examination of the causes of the bad effects of marsh miasmata, as given by the best authorities upon the subject, he draws the following conclusions.

In the first place, agues are remarked to be the diseases of wet marshy districts, and to prevail most abundantly in countries which are low, swampy, and humid. Secondly, simple moisture is not adequate of itself to the production of ague. The moisture of the sea, and of large lakes, for instance, do not produce ague. Thirdly, it does not occur in cold climates or seasons, and invariably requires a certain degree of heat. Fourthly, ague appears in the temperate zones at least, to require a certain degree of heat and drought, in the transition from humidity. Fifthly, the existence of a marsh or swamp is not adequate or necessary for the production of ague. Sixthly, agues prevail where no marsh is visible. In most of these situations, the surface is porous and penetrable and retains moisture; and it is either a long time undergoing the process of desiccation, or is in a state of alternate dryness and moisture.

> "From the whole of the facts and considerations now adduced, in conclusion, I think it may be justly inferred, that, while the surface of the earth is desiccated chiefly in two modes, either by direct solar heat, or by the successive transition of currents of warm air over it, and in general by both combined, wherever the former mode of desiccation predominates over the latter, agues and remittents and similar fevers, will prevail. Desiccation by solar heat alone, or principally, I infer, is extremely productive of the febrific poison; and wherever this process has attained a certain stage, if human beings are exposed to it, they will infallibly be attacked. It cannot be too frequently impressed, that neither what is in common language called a marsh, nor marshy air, is requisite to produce fever; and that any surface which has been previously moistened, and which like calcareous or coralline rock, sandy soil, or argillaceous matter, may retain moisture, and is then subjected to the desiccating process by means of the solar rays, will at a certain period of that process give rise to fever. In this manner, perhaps, are we to explain the fact mentioned by Dr. Bisset, that in 1759, vernal agues were abundant in the dry and elevated districts of Cleveland in Yorkshire, which is regarded generally a very salubrious situation."
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> "In situations, on the contrary, in which desiccation is accomplished chiefly by the successive transition of ærial currents, agues are much less likely to prevail; and if these currents are so frequent and considerable as to amount to breezes or winds, they either prevent the generation of the febriferous principle, or they dissipate it as rapidly as it is produced."

Dr. Craigie rejects the opinion that in the beginning of fever, there is any affection of the brain and spinal chord, further than is seated in the blood vessels of these parts, in common with the capillary system at large. He doubts whether there is any peculiar affection of the nervous chords, branches, and extremities. It has been ascertained, he says, with considerable accuracy, that the primary effect of fever is sedative, and destructive of the energy of the capillaries and exhalents. When the process of fever is established, it is evidently seated in the capillary net-work; and in those vessels which open in the several membranes and organs. It is not confined to one set of capillaries. It is seated neither in the vessels of the brain and spinal chord, as maintained by Ploucquet, Clutterbuck, and Mills, nor in those of the lungs, nor in those of the alimentary canal, as asserted by Broussais; but it is diffused over the whole minute capillary net-work of the aortic and venous branches of the capillary and exhalent system, in every texture and organ. This does not exclude local affection. In some instances and in certain epidemics, there is a more decided affection of one set of capillaries than of others. In one case, the capillaries of the brain may be most affected, in another those of the lungs, in a third, those of the stomach, in a fourth, those of the liver, in a fifth, those of the intestines, and in a sixth, perhaps, those of the urinary organs.

The blood in ague differs in no respect from that in other healthy states of the body, further than in not being so thoroughly aerated, in consequence of the difficulty with which it moves through the capillary system of the pulmonary artery and veins. The blood moves more slowly than natural, and hence an accumulation takes place. The energy of the muscles of respiration, moreover, is diminished.

The blood moves more slowly than natural through the capillaries. The idea of its increased velocity is gratuitous; when the action of the heart is morbidly accelerated, it does not empty itself at each contraction, if it does so in health. When the contractions of the heart become more frequent, they are less complete and efficient. Much more blood passes through it when it contracts sixty times than when it contracts seventy.

From the first appearance of the febrile symptoms, the energy and vigour of the capillaries and exhalents are immediately destroyed. They become inordinately contracted at the invasion of the disease, and in the cold fit; whereas, in the hot fit, the capillaries become distended, but with a contracted state of the exhalents. This is shown by the injected appearance of the face during the hot fit. The blood is accumulated in the capillaries, but is not removed from them by the veins. Hence congestion takes place throughout the capillary system. This general congestion constitutes the peculiar oppression that has erroneously been regarded as an affection of the nervous system exclusively. This state cannot be proved by anatomical inspection, because individuals are never cut off on the first days of fever. We see only the effect of the morbid action and not the nature of the process itself. But it admits of a satisfactory evidence, by comparing the appearances found in different patients cut off in different states, and throwing aside the phenomena which are manifestly to be regarded as mere effects, selecting only those which, by their constancy, appear to be entitled to the character of causes.

The most usual appearance in fever, is a preternatural accumulation of blood in the capillaries of all the organs, and most particularly in those which are naturally most copiously supplied with blood, for instance, the brain and spinal chord, the lungs, the liver, the spleen, and the kidneys, and among external organs the muscles and the skin.

These Dr. Craigie considers as facts which cannot be disputed. On their cause, various opinions have prevailed; the chief of which may be referred to two heads: the first, that which ascribes this congestion to some state of the solids; the second, that which ascribes it to some change in the fluids. The vessels of the living body undoubtedly undergo some change from the healthy state, but the nature of this change is matter of conjecture. There is good reason to believe that the innate properties of the vessels, whatever they are, are impaired, and their *tone* or *energy* enfeebled. In a state of health these vessels possess some living power, such as *endosmose* and *exosmose*. If such properties exist they may undoubtedly become impaired.

"That some change or disorder, some impairment of energy in the capillaries, does take place in fever, may be inferred, 1st. from the general phenomena of that disease in which the circulating, nutritious, and secreting functions are very much disordered; 2dly, from the effects of that disease in which we always recognise the chief lesions in the capillaries of the brain, lungs, muscles, &c.; 3dly, from our knowledge of the usual causes of fever, which, in other instances, operate chiefly on the vascular system, or the secreting membranes or organs."

In regard to the fluids, the blood may be altered in quantity, or in quality. The first Dr. C. considers impossible. The apparent increase is owing to the loss of power in the capillaries to transmit the blood, and the consequent accumulation and congestion. Among those who have supposed the quality of the blood to be altered, Dr. C. particularly notices Dr. Stevens, who infers that the blood loses its saline impregnation in ague. Dr. C. thinks that the facts upon which Dr. Stevens founded his opinions, have not been sufficiently well established to make it necessary to attempt to refute the opinions founded upon them.

Dr. C. concludes that it is possible for some insalubrious materials, probably those which constitute malaria, to be carried along with the blood. In other words, he allows that the blood may be rendered less fit for circulation by the mechanical admixture of foreign matters, but he denies the possibility of a chemical change; excepting that produced by respiration, and by the *morbid action* of fever itself. The embarrassed respiration, he says, which is seen in the cold stage of ague, cannot continue long without effecting very great changes in the blood. As aëration is essential the blood must be altered after a few paroxysms. As it circulates more slowly than natural, or perhaps stagnates altogether, it does not part with so much of its carbon, nor receive so much oxygen as it does naturally, nor exhale so freely its watery vapour. In consequence of the interruption of the digestive function, the materials of the blood are not renewed; so sanguification must be suspended if not subverted.

The application of these principles to ague is attended, Dr. C. allows, with considerable difficulty, and the most difficult circumstance is to explain in what manner any morbid change of the sanguiferous, or of the nervous system, should continue for a certain time, and then cease, and return again in a certain period. Cullen ascribed the alternations of ague to the general tendency of the human body to diurnal revolution. Darwin and Hildenbrand have advanced different theories, and the most recent speculator on this subject, M. Bailley, has brought forward a doctrine which Dr. C. considers virtually the same with that of Cullen. According to M. B., these revolutions are merely exaggerated forms of certain natural motions observed in all cases, and more or less regular in the human frame. Each space of twenty-four hours in the human frame, consists of a continued series of excitations or rather congestions. These are the effect of physical and hydraulic laws and show the influence of gravitation and other causes over vital phenomena.

In regard to the treatment of intermittent, Dr. C. recommends rather an active course at the outset.

At the approach of the cold fit, he considers it important to apply heat to the pit of the stomach and the extremities. An opiate, or laudanum applied externally to the spine in combination with soap liniment, equal parts of each, at the approach of the cold stage, has prevented the paroxysm. In other cases, opiates given before the cold fit, have rendered it milder and shorter, and after one or two paroxysms have cured it.

Dr. C. recommends full vomiting at the approach of the cold fit. Twenty, twenty-five, or thirty grains of ipecac., with half a grain to a grain of tartarized antimony may be given at first, and the patient should be made to drink freely of chamomile tea, &c. Dr. Kellie, of Leith, has recommended the application of a ligature upon one of the large arteries of the extremity, as very effectual in preventing the approach of the cold fit or checking it, if applied before its onset; and Dr. C. thinks it proper to employ it.

In recommending the free use of warm drinks in promoting vomiting, our author notices the opinion of Cleghorn, who forbids drinks on the idea, that, as the *vena cava* and the subclavian are loaded with blood, the thoracic duct must be compressed, and, consequently, the fluid contained in the stomach is not absorbed, but distends the whole alimentary canal. He recommends that the patient should only rinse his mouth frequently or use slices of lemon or similar substitutes, which will assuage the thirst. Hildenbrand disapproved of cold drinks. Dr. C. adds that they are more likely to overload the stomach than hot drinks. The latter given with the view of facilitating vomiting, are free from this objection and relieve thirst at the same time.

The very sparing use of fluids in catarrh and in pleurisy, is recommended by Dr. Williams in his lectures which are now publishing in the Medical Gazette. In the latter disease, he would have the patient merely sip from time to time, or rinse his mouth in order to avoid the extreme thirst attendant upon the disease. Catarrhs, he maintains, can be cured with great expedition, by entire or almost entire abstinence from fluids.

If cold drinks are used, Dr. Craigie recommends as preferable, the effervescing drinks, such as soda water, brisk beer, mouthfuls of the saline mixtures, or ptisans with nitre dissolved in them. Animal jelly is recommended by Hallè to diminish the sense of burning at the pit of the stomach, and abate the oppression and anxiety. Some physicians have recommended venesection at the very commencement of the paroxysm in the cold stage. Dr. C. thinks it safest to avoid it, unless particularly indicated. When there are symptoms of local inflammation or congestion, he advises the abstraction of from ten to fifteen or twenty ounces of blood, according to circumstances, succeeded, when required, by the application of from twelve to eighteen leeches. When this is done early according to the concurrent testimony of many authors, it occasionally cuts short the disease, always moderates its severity, and paves the way for the efficient employment of other remedies. The surface should be sponged with tepid water. Cupping and sinapisms may be used with safety.

In the hot stage, opiates are as useful, as in the cold. Dr. Lind, of Haslar hospital, draws the conclusions; 1st, That they shorten and mitigate the violence of the fit with great certainty. 2dly, They give general relief to the head, diminish the burning heat of the fever, and occasion profuse sweating, with agreeable softness of the skin. 3dly, They induce refreshing sleep with the general extinction of painful and uneasy feeling. Delirium forms their only contra-indication; and when this is present, it is only necessary to wait for its subsidence. Lastly, Dr. Lind maintains that opium is an excellent preparative for the use of the bark. Dr. Craigie says that the proper time for its exhibition is the beginning of the cold fit. If given then, it is unnecessary in the hot one. In simple, open ague, it is unnecessary in the hot fit; in cerebro-meningeal and pneumo-bronchial congestion its use is improper, unless preceded by venesection.

In the sweating stage, the only thing necessary is to keep the patient from exposure.

In regard to the use of bark, it may be given when the urgency of the case requires, in the paroxysm with perfect safety. The great objection to its use at this time seems to be, that the stomach will not bear the bark in substance, and it is consequently rejected. With regard to quinine, this objection would not apply with so much force. Our author gives a full account of the various kinds of bark and the different methods of its administration; and of the various substitutes that have been employed where it could not be obtained. The discovery of quinine has rendered these substitutes useless in cases where the bark in substance could not be borne. Arsenic is the only preparation that can compete with it in efficacy, and it is known that this has succeeded in some cases where the bark has been unavailing. Our author gives an account of the employment of the web of the common spider, which has been used with success by Dr. Jackson, and by Dr. Gillespie of Edinburgh, in the West Indies. Two pills, each containing five grains of cobweb, were given at intervals of two hours, commencing two hours before the anticipated return of the fit.

Cases of ague terminate in death, either by the direct effect on the constitution at large, or by injury done to some organ, the structure and properties of which are essential to life. Death takes place, as it were, by paralysis. In the greater number of fatal terminations, there is reason to believe that mechanical injury of some important organ occurs. Lesions may occur in the brain or its membranes, in the lungs or in the pleura, in the pericardium, in the stomach or in the intestines and in the liver or spleen. *Coma*, or apoplectic death, suffocation, or peripneumony, or some remarkable lesion of the nutritious organs, from gastro-enteric or intestinal disease, are the ordinary modes in which death is caused.

REMITTENT.—Dr. Craigie is disposed to allow the interchangeable nature, the identical origin, and the simultaneous existence of Intermittent and Remittent, though he regards it both as more proper and more useful to distinguish them from each other. The following are the pathological appearances found in those who die of remittent:

> "If death takes place early, the surface is only tinged slightly yellow; if later, the yellow tint is deeper and more general and extensive. A dark livid or marbled appearance of the shoulders extending to the hind-head is almost

invariable. Livid blotches or spots on different parts of the person, especially those which were subjected to pressure, are not uncommon; and the scrotum is often livid. Petechial spots are occasionally seen; the belly is tense and tympanitic; and swelling and suppuration of the parotids are sometimes observed."

"The membranes of the brain are always more or less, sometimes very much injected and reddened; serous fluid is effused into the subarachnoid tissue, elevating the arachnoid membrane, and giving it an opaque thickened appearance, simulating coagulable lymph. The convolutions are more or less flattened. The hemispheres often preternaturally adherent. The substance of the brain is firm, but always more vascular, and presenting more numerous minute points and fissures effusing fluid blood than natural. The ventricles contain fluid which is occasionally limpid and colourless, occasionally slightly yellow."

"The lungs are always more or less congested, with dark coloured blood, sometimes presenting appearances of inflammation, as effusion of frothy serum into the pulmonic tissue, and some degree of induration. Lymph is occasionally effused, connecting the pulmonic and costal, and the pulmonic and diaphragmatic *pleura*, with serous fluid in the general cavity of the membrane. The pericardium is in general reddened and injected, and its cavity occupied with more or less serous fluid. Clots of blood and fibrinous matter are found in the right side of the heart and the pulmonary artery, less on the left side."

"The liver is generally rather larger, and more gorged with blood than natural; and the gall-bladder moderately filled with thick ropy bile."

"The peritoneum is in general dull-coloured and grayish, void of its usual lustre, and covered by a ropy glutinous exudation. The omentum is shrivelled and shrunk. The mesenteric vessels are loaded with dark-coloured blood, and sometimes minutely injected. The stomach and intestines are much distended with air, and contain more or less dark-coloured muddy fluid like coffee-grounds, which also tinges the mucus adhering to their mucous membrane. When this is removed by washing, the mucous membrane is found much congested and injected with numerous well-filled red vessels, and occasionally studded with red arborescent or arteroid patches."

"The spleen is generally soft, flaccid, and sometimes completely broken down."

"The urinary bladder is contracted in size, and contains generally a little turbid high-coloured urine; and its mucous membrane is more or less injected with blood."

"The kidneys are more or less injected, and their vessels often loaded with thick semifluid blood."

"These appearances, which indicate the effects of the febrile action on the different organs, show that the force or violence of the action, though operating generally on the whole system of capillary vessels, had nevertheless been most detrimental to the powers of life, by acting on the capillaries of the brain, its membranes, the lungs, the stomach and ileum, and the liver and kidneys."

There is no doubt, he continues, that the vascular system of the muscles must be very much overloaded with blood. The loaded state of the lungs also, and the frothy, ropy, blood-coloured serum found in them is the result of imperfect circulation in the pulmonary artery. One of the effects of the febrile action is doubtless to interrupt the circulation in the pulmonary capillaries, and thereby cause congestion and a sort of passive peripneumony.

The diseased action, though diffused over the whole frame, may be distinguished into three stages. The first is when the head is most affected and the distension of the cerebro-meningeal vessels most conspicuous; and the close of which is marked with temporary abatement, corresponding probably to the commencement of effusion from these vessels, &c. The second is, when the disorder of the gastro-enteric mucous membrane becomes fully established, which is indicated by increase of the burning pain at the pit of the stomach, incessant vomiting, first of slimy matter, then of dark-coloured fluid, &c. This stage often terminates fatally; but if it do not, the third stage, that of oppressed respiration and pulmonary *asphyxia* ensues, and terminates at once the disease and the life of the patient. The dark-coloured fluids ejected by the stomach, proceed from the disorganization of the capillaries, which allows their contents to flow into the cavity of the stomach and intestines. The blood becomes stagnated in these vessels, as they are unable to transmit it to the veins. They are distended beyond the power of spontaneonsly recovering themselves, and thus finally become disorganized. Dr. C. believes it to be a very erroneous notion, that the yellow tint of the eyes, and the skin of the head, neck, &c. is occasioned by effusion of bile. On the contrary, it is produced by the disorganization of the capillaries of the brain and the gastro-enteric membrane, and the effusion of the sero-albuminous fluid in the former organ, and the sero-sanguineous in the latter. The capillaries of the skin are in the same state of over distension as elsewhere. The stagnated blood undergoes a partial separation, and the numerous minute vessels which at the onset of the fever gave the face and eyes the red and ferrety aspect, now give a yellow tinge.

The summer and autumnal remittent, Dr. Craigie considers as identical with yellow fever.

The general intentions in the treatment of this disease, are to unload the capillaries, especially the cerebro-meningeal; and to prevent effusion, the decomposition of the blood, and capillary disorganization.

In the first place, remedies must be employed which act on the capillaries in general and on the head in particular; such as venesection to fifteen, twenty, or twenty-five ounces; shaving the scalp, cupping, cold lotions and affusion, and blisters. The venesection to be repeated when the continuance of the symptoms render it necessary, and leeches applied to the abdomen. Purgatives.

Secondly, remedies must be resorted to which act upon the circulation in the gastro-enteric mucous membrane. Leeches should be applied to the abdomen, not with the same view as in the former case, of relieving the brain by derivation, but in order to relieve the capillary distension in this part. Calomel should also be employed with this view.

Thirdly, remedies which act upon the circulation of the cutaneous capillaries; such as saline diaphoretics and diuretics, cold affusion to the head, and warm fomentations to the extremities.

For alleviating the distressing symptoms of constant epigastric burning and anguish, hiccup, and frequent vomiting of dark-coloured fluid; ether, sulphuric, or nitric, ammoniated tincture of valerian, camphor, musk, and carbonate of ammonia are useful in different cases. Dr. C. considers the use of calomel, except as a cathartic, as proved to be useless or injurious.

YELLOW FEVER. Dr. Craigie considers intense heat as contributing most powerfully to develope yellow fever. The circumstance which appears most general, he says, is that of a calm, windless state of the atmosphere, preceded often by a train of weather uncommon in the particular place of its occurrence. In the West Indies, it is observed, that seasons in which there is the usual compliment of gales, tornadoes, &c., have been free from fever; while the seasons most remarkable for sickness have been equally remarkable for calm weather and absence of winds. The electrical state of the atmosphere has probably its effect in producing the disease. In ordinary circumstances the positive and negative electricities are exactly balanced, but at certain periods, particularly when the sun approaches the meridian of any given place, this equilibrium is subverted; and in order to restore it, not only thunder storms, but often violent hurricanes and torrents of rain take place. Previous to these explosions, there is reason to believe that positive electricity is slowly and gradually accumulated in the atmosphere, and it is this condition that appears to favour the disease.

After a survey of the various opinions in regard to the causes of yellow fever, our author draws the conclusion that it is a disease proceeding not from the influence of terrestrial *miasmata* or mere local peculiarities alone, but from atmospherical peculiarities entirely; which, however, operate much more directly and forcibly in situations favourable to the production of terrestrial emanations. While ague is the product of the marsh, and remittent is the effect of a more concentrated form of the same exhalation from any moist surface in the process of solar desiccation, yellow fever appears to be the exclusive product of that state of atmosphere which takes place after a long continuance of solar heat, with little or no wind, in those points chiefly where the action of the sea and land are in constant communion and interchange. It is rare in the interior, or even upon the margin of great rivers, further from their mouths than the extent of the tides. "Yellow fever becomes epidemic, neither in consequence of intense temperature alone, nor humidity alone, nor filth, nor the presence of foul docks and wharves, nor desiccated marshes, nor decomposed cabbages, or coffee, or mangroves, nor even charred shipholds, but a certain condition of the atmosphere, which recurs at very uncertain intervals, and of the recurrence of which the circumstances now enumerated are indications."

Dr. Craigie considers the rapid decomposition of vegetable substances, not a *cause* but an *indication* of a febriferous state of the atmosphere. He draws certain conclusions in regard to the propagations of the disease which he expresses in the form of ten aphorisms; the first two of which are the principal. These are in substance, that yellow fever is the spontaneous product of the atmosphere, operating on the sea coast or beach, in tropical or warm climates, and in hot seasons elsewhere. Whether regarded as the ordinary remittent modified by atmospheric agency, or as a distinct and specific disease, its formation and development always depend on climate and atmospherical influence, co-operating with local causes. 2d. If these causes are admitted they will continue to exist after the first appearance of the epidemic. It is therefore unnecessary and unphilosophical to resort to the assumption of personal infection or transmission.

With regard to the pathology of yellow fever, Dr. C. concludes that by carefully comparing the combined succession of phenomena in the living frame during the disease, with the appearances presented by the organs after death, we shall arrive at the conclusion that it is a peculiar subversion of the action of the capillaries of the whole system tending to the disorganization of that vascular net work; and proving fatal by the deleterious influence of this subverted action on the brain and its membranes, and the stomach, duodenum, and ileum. This process is not *increased action.* The action of the heart, indeed, is at first augmented by the irritative stimulus in the capillaries, in which the real seat of the disorder is established.

"The action of the capillaries and exhalents is impaired, enfeebled, and deranged; the motion of the blood is thereby retarded and finally interrupted; the requisite changes are not effected; and while the capillary system is thus overloaded with dark unchanged and unrespired blood, which speedily becomes disorganised, their apertures eventually give way, and allow the escape of serum or blood in various tissues and organs. Thus, discharges of serum or blood take place into the cerebral chambers; and serum with albuminous flakes first, and disorganized blood afterwards, escapes into the cavities of the mucous organs, as the stomach and intestines."

This is the source of the coffee ground discharge. This stagnation and disorganization of the circulating fluid, pervades the capillaries of the mucous surfaces generally, and those of the skin. Incisions into these parts show that the constituent parts of the blood are broken down and extravasated. While in some parts serum is effused only; in others, serum tinged with a faint brownish red, and in others, actual imbrowned blood, void of its usual cohesion and tenacity, is effused. This is a real disorganization of the circulating fluid.

Yellow fever consists, therefore, in a general affection of all the capillary vessels of the whole frame and all the organs. The vascular disorder is most conspicuous in the brain, in the gastro-enteric mucous membrane, and in the skin. The primary cause of this vascular disorder may be referred to two heads; 1st, an affection of the containing vessels; and 2dly, some change in their contents. Which is the primary one, is doubtful. It seems almost certain, that the solid tissues of the vessels are in some manner deprived of their usual properties, and are, for the time, rendered unable to circulate the blood and contribute to the different secretions. Hence they become congested.

Among the various hypotheses in regard to the supposed changes in the blood, Dr. C. regards that of Dr. Stevens as the most tangible and intelligible; that in yellow fever, as in other fevers, the blood is deprived of its saline impregnation and alkaline properties, and hence becomes darker, less fluid, and less fitted for use. This hypothesis, he says, may be applicable in some cases but not in all. The most intense yellow fever attacks some Europeans so immediately after their arrival in a tropical part, that it is impossible to suppose that the constitution of the blood had, in so short a time, undergone so great a change; and conversely, persons who have been long exposed to the action of causes that might, according to Dr. Stevens, deprive the blood of its saline impregnation, are not more frequently attacked with yellow fever than others. In tropical climates, where yellow fever principally takes place, it has been observed, that all the secretions are more saline than in temperate. In short, all that can be concluded on this point is, that we have no positive facts on the influence of the changes in the chemical or mechanical qualities of the blood, in producing yellow fever.

The treatment of yellow fever recommended by Dr. Craigie is in conformity to his views of the pathology of the disease. He thinks that two objects are to be kept steadily in view. The first is, to abate and remove the excessive congestion and distension of the capillaries, so as to prevent stagnation and consequent extravasation. The second is, to employ such measures as tend to restore and maintain the various secretions. For the first object, the great means are general and local blood-letting, efficient purgatives, and cold applications to the head, such as the douche, iced water, or bladders filled with ice. Calomel from six to ten grains, with scammony or extract of colocynth, &c. For the second intention, the body should be washed with soap and warm water; the patient enveloped in blankets wrung out of hot salt water, and the cold affusion applied to the head. Acetate of ammonia. James's powder, antimonial powder, either with or without calomel, may be given in equal parts of ten grains each, every second or third hour. Blisters, sinapisms, &c., are sometimes useful. When there are symptoms of obstruction in the liver, calomel or blue pill may be given after the active symptoms have terminated.

Where the character of the symptoms is that of congestion of the whole vascular system, and consequent oppression of the vital organs and restraint of all their actions, medical treatment is much less efficient and must be greatly modified. Venesection is improper, because, although the large vessels may be emptied in this manner, the capillary system is not so promptly relieved. The principal remedial agents should be the warm bath, soap and hot water, after which the skin should be rubbed dry with a flesh brush; spirituous and stimulating embrocations are useful. If venesection is indicated by any particular symptoms, it may be employed to the extent of ten or twelve ounces, also cathartics or enemeta, and calomel. M. Dalmas, Dr. Stevens and others have censured the use of calomel. The latter, Dr. G. W. Stedman, and others, have employed saline remedies, given in such a manner as not to purge, as is averred, with great success. Dr. Craigie observes, that the principal objections to the results given by Dr. Stevens, are that the success seems too great for the means used.

Dr. Craigie proceeds next to continued fevers. Of these he makes four varieties. The first of these is synocha, or simple inflammatory fever, inflammatory fever without any particular local affection. The pathology of this he conceives to consist, like that of the fore-mentioned fevers, in a congestion of the general capillary system.

Dr. Craigie, as we have already mentioned, considers it very doubtful whether any case of fever is, at the onset, attended with any peculiar local affection. In every fever, there is to a greater or less degree an affection of the whole capillary system, and as the disease advances, some sets become more diseased than others. In this way, only can a local affection exist. It comes then simply to be a question whether the description is taken from the beginning or the termination of the whole course of disease. If a fever come to its termination on the second, third or fifth day, it may do so without manifesting any particular direction. It is true that such febrile attacks seem to be attended with the suppression of some habitual discharge, such as menstruation, for example.

Dr. C. divides continued fevers into, first, simple fever with much affection of the sanguiferous system. Secondly, fevers in which the derangement of the circulation is connected with distinct disorder of one or more vital organs, and a tendency to disorganization or disruption of the capillaries.

In the latter class is gastric, gastro-splenic, or gastro-enteric fever. A. With disorder of the stomach or spleen, intestinal tube, or liver. B. Fever with general affection of all the tissues and organs, and tendency to capillary disorganization in the most vascular.

a. Slow nervous fever; *b*. putrid or pestilential, spotted or malignant fever. *c*. Common or mixed continued fever.

Our author divides his second class of fevers into the three varieties above named; gastric, gastro-splenic or gastro-enteric, according as the stomach, spleen, or intestines, are most affected.

"The entero-mesenteric fever of Petit and Serres, in which the aggregated glands of the intestines are affected, must be regarded as an intense form of the latter disease, (intestinal fever,) or as fever taking place in persons who have previously laboured under *dothinenteritis.*"

In proceeding to the division B. Dr. Craigie remarks that there is reason to doubt whether physicians and medical observers have attended with sufficient care to the distinctions of the different kinds of continued fever established by Cullen. This author says, "I think that the limits between *synochus* and *typhus* will be with difficulty assigned; and I am disposed to believe that the *synochus* arises from the same cause as typhus and is therefore only a variety of it." We give these words as quoted by Dr. Craigie, because the authority of Cullen has lately been adduced as an obstacle to the abandonment of the distinction between typhus and synochus, which the advancement of our knowledge on the subject of fever has apparently rendered expedient. The quotation above, together with a note also quoted by Dr. Craigie, shows that Cullen considered typhus and synochus to differ principally in degree.

It seems somewhat surprising that Dr. Craigie, writing in 1836, makes no mention, either in his text or in the list of books at the head of his chapters, of the most recent authors upon the subject of fever. He says nothing of Louis, nor even of Southwood Smith or Tweedie. This may perhaps be accounted for by this part of the work having been written, as it would seem, at a date considerably antecedent to its publication. We find references to later works, as we proceed in the volume. This omission in regard to fever is very unfortunate, since the labours of Louis have created a new æra in medicine. The universal acceptance, which the observations of this writer have met with, and the general adoption of his methods of inquiry, open on an entirely new field of discovery in regard to the subject, and make our knowledge constantly progressive.

Dr. Williams (Elements of Medicine) unites typhus and synochus under one head. Dr. Jackson of Boston, whose opinions, from his experience, the opportunities for examination he has enjoyed, and the attention he has given to the subject, are worthy of the utmost respect, considers the typhoid fever of New England and probably that of Old England as the same with that of Louis, while the typhus fever described by Dr. Gerhard in this Journal resembles that described by Dr. Lombard of Geneva, as witnessed by him in Ireland and also in England.

Our author describes in his last section of fevers; "fever with a tendency to gangrenous inflammation and affection of the glands."—The plague. Upon this subject, he gives us a full and well executed account of the plague, embracing the facts that have been made known by the various writers upon the subject. His views of its pathology are in coincidence with those in relation to other fevers. He thus sums them up:

"In short, I think it inevitably results from the anatomical facts and the symptoms of the distemper, that in plague the capillary system of the whole frame is suddenly smitten by a species of atony or loss of power of transmission, and that a consequent stagnation of blood and all its consequences ensue."

When this is intense and irreparable, it kills immediately; or within a few hours or a day at most; and the phenomena are those of death by *hæmastasis.* If the capillary vessels of the organs have sufficient energy to resist this species of sudden inertia, it is only at the expense of death taking place in certain points of the skin, and suppurative disorganization in the lymphatic glands.

Dr. Craigie seems to adopt in regard to fever, a modification of the views of Cullen. Instead of *spasm*, Dr. C. supposes a *palsy* of the extreme vessels. How far it is philosophical to look to remote branches for the origin of a general disease, we have not opportunity to discuss. It is certainly more in accordance with common practice, if not with nature, to look to the fountain head for the source of the impurities which are found in the remote streams. Nor can we readily understand, how vessels, which pervade the whole surface of the body, should be suddenly and simultaneously affected by an external cause, unless by the agency of a power which has generally been conceived to belong to the nerves alone —the supposed instruments of sympathy of distant parts. If this power is conceded to the capillaries, we have then two sets of vessels possessing similar powers. On the other hand, if the nerves are the agents by which this consent or simultaneous action is produced, we are brought back to the doctrine of Southwood Smith and others, which makes the nerves the parts primarily affected in fever; which doctrine is rejected by Dr. Craigie.

We come next to the second part of the volume, Book II, which treats of inflammations. The account of general inflammation need not detain us. The subject is a familiar one, and perhaps we have not as yet any writer who can compete with John Hunter in authority; and therefore we are not to look for any thing very new. Dr. Craigie draws from familiar sources, Hunter, Thompson, James, &c., and his views of the proximate cause of inflammation agree with those on fever; that it is seated in the minute vessels arterial and venous, termed the capillaries.

He treats of inflammations as they appear. I. In the skin. II. In the mucous membranes. III. In the serous membranes. IV. In the compound organs. V. In various tissues, simultaneously or successively.

Our author considers all cutaneous affections as merely different forms which inflammation may assume in the skin. 1st. Cutaneous inflammation may be seated in the exterior or cuticular surface of the chorion. 2dly. It may be found round the *papillæ* or minute elevations of the chorion. 3dly. It may affect the substance of the chorion. 4thly. It may occur at the inner or attached surface of the chorion.

Dr. C. undertakes to classify inflammations of the skin, according to the part of it in which they are seated, according to the mode in which the inflammatory action proceeds, and according to the effect which it produces.

He makes the eight following divisions.

1. Diffuse or Spreading Inflammation, such as Measles, Scarlet Fever, &c.
2. Effusive Inflammation, such as Erysipelas.
3. Punctuate Papular Inflammation, such as Strophulus, Prurigo.
4. Punctuate Desquamating Inflammation, such as Lepra.
5. Punctuate Vesicular Inflammation, such as Herpes.
6. Punctuate Phlegmonous or Pustular Inflammation, such as Variola.
7. Punctuate Chronic Phlegmonous Inflammation, such as Boil, &c.
8. Punctuate Phlegmono-Tubercular Inflammation Chronic, such as Elephantiasis.

The subject of venesection in scarlet fever is one about which there has been much controversy. Our author says it should be used only where there is much oppression or pain of the head or chest, after the eruption is out, and at the early stage of the eruption. When employed, fifteen, twenty, or twenty-five ounces of blood should be taken in case of the adult.

In regard to erysipelas or "rose," our author seems to make no distinction between the erysipelatous fever of Sydenham and the erysipelatous inflammation of John Hunter; for while he includes the former among his synonymes, with rosa, erysipelas, St. Anthony's fire, ignis sacer, &c., he tells us that John Hunter is the first who has observed the disease with a discriminating eye. He does not hint that there may be any thing peculiar in the inflammation, but regards it as a *burn* produced by an internal cause. In a recent number of the Edinburgh Medical and Surgical Journal, Dr. Craigie has given an account of what he considers to be diffuse adipose inflammation, which will include much of what has heretofore been described as erysipelas. The various classifications that have been made of diseases which have had at some time the appellation of erysipelas, have formed a skein so entangled, that it is no easy task to say what is and what is not erysipelas. We think, however, that until the subject is better understood, there is ground for the distinction between the erysipelatous fever of Sydenham and the erysipelatous inflammation of John Hunter, although they may be convertible and of the same nature. We have our doubts, also, whether the disease, or peculiar eruption caused by eating certain fish, can properly be considered as erysipelas, as it has been by our author and many other writers, for one reason among others, that it occurs in healthy persons, not predisposed to erysipelas, while erysipelas requires a certain state of constitution to favour its reception.

The treatment of erysipelas our author would have conducted on the general antiphlogistic plan, adapting it to the particular form of the disease; and considering the indications to be to relieve capillary oppression. Of course, the employment of tonics, which has lately been revived at some of the English hospitals, is entirely averse to this, and we find no mention of their use. Dr. Craigie does not profess to give an account of the various modes of treating diseases, but only those methods which he considers best.

It has become a matter of considerable interest, to know with certainty, how far the immunity afforded by cow-pox against the attacks of small-pox extends, and what reliance is to be placed upon it. It has been supposed by most physicians, until recently, that the opinion entertained by Jenner, of the perfect protection afforded by vaccination when well performed, was correct. Recent experience, however, has proved that this is not exactly the case. According to Dr. Craigie, the researches of Dr. Thompson of Edinburgh, and of many others, have shown that Jenner's views must be received with the following modifications.

> "The human body is liable to be attacked with small-pox more than once in the duration of life. Every previous attack modifies that which follows; and a person who has once undergone the disease, though he may be subsequently affected with it, undergoes it in a different form. In the same manner, an individual who has suffered cow-pox may be attacked with small-pox, exactly as one who has suffered small-pox may be again attacked with that disease. A person, however, who has suffered cow-pox, is not only much less likely than another to be affected with small-pox even when epidemic, but will certainly have them in a much milder form, and in a form which is almost impossible to prove fatal. He may have the disease in what is termed the *modified form*, or in that named chicken-pox; and according to the experience of the epidemic of 1816—1820, one death takes place in 330 thus affected; and it is probable that

more extensive experience would show the proportion of mortality to be much greater than it really is."

The extent of Dr. Craigie's volume allows of pretty full treatises upon the most important diseases discussed; and we find a very full account of small-pox. Under this head, he resumes the subject of the protection afforded by vaccination.

His conclusions are as follows:

1st. Small-pox, though, in general, it occurs only once during life, may, however, attack a second or even a third time.

2d. A second attack is more frequent when the first is mild. If the first attack be confluent, a second is rare.

3d. An attack of spurious small-pox, or of chicken-pox, does not secure from the confluent small-pox.

4th. Small-pox from inoculation does not secure from the natural small-pox.

5th. Every previous attack modifies the subsequent.

6th. The most powerful modifying agent of small-pox is cow-pox; vaccine and variolous matter applied together, counteract each other.

7th. Cow-pox destroys the susceptibility to inoculated small-pox almost entirely, but the susceptibility to the natural disease or that by inoculation, it does not extinguish. This susceptibility, however, it diminishes in a much greater degree than inoculated small-pox.

8th. The susceptibility to a second attack of small-pox, and to attacks of small-pox after inoculation, is principally favoured by the existence of an epidemic constitution of the atmosphere, and by early life, especially an age below ten years. If no epidemical constitution take place, the occurrence of second attacks may not be observed for a long series of years. But if the atmosphere acquire an epidemic or variolous constitution, neither the circumstance of a previous attack, nor vaccination, can secure many of those under ten years of age, and but a few between that and thirty, from small pox.

On the subject of chicken-pox, Dr. Craigie, after mentioning the views of Dr. Thompson, in regard to its identity with small-pox, expresses the opinion that the exquisite and well-marked cases of chicken-pox may be distinguished from exquisite and well-marked cases of small-pox; while other cases glide into each other.

It would seem that this question might be very easily settled. Small-pox is confessedly one of the most contagious of diseases—one of the few that the most zealous anti-contagionists make no dispute about. Now, chicken-pox is a very common disease, and if it can be proved in any one case to have produced small-pox, there can be no doubt that they proceed from the same virus. We do not know that any such case has occurred. If in a disease so common as chicken-pox, this has never been proved to be the case, we think the distinction between them is well founded.

Our author describes several cutaneous diseases, which have been little noticed by writers in general, and which are not known among us; such as Sibbens, Radesyge, Asturian Rose, Pellagra, Cayenne Leprosy, &c. These we shall pass over, and proceed to the second chapter of Inflammations—inflammation of the mucous membrane. He gives the following account of the commencement of inflammation in this membrane.

"When a mucous membrane is attacked with inflammation, besides the usual phenomena of redness, heat, pain, and swelling, it presents other phenomena in

> the change or perversion of its action. It is first unusually dry, and then begins to secrete a thin serous fluid, which principally, from the rawness of the surface, seems to possess acrimonious or irritating properties. The surface of the membrane is raw, sore, and extremely tender; and the application of foreign bodies produces much uneasiness and distress. After the lapse of a few hours or a day, sometimes a longer space, the preternatural dryness abates, the thin serous fluid becomes thick, and more or less copious, and though the rawness, tenderness, and soreness, are little abated, or may continue unchanged or even increasing, the redness is less deep, and the swelling less intense."

This state may either suddenly ensue upon an apparently healthy state of the membrane, or it may come on more slowly after the membrane has been raw, tender, and sore, and sensitive to the air or to the application of foreign bodies. In the first case, the inflammatory process is the immediate and direct consequence of the action of the exciting causes on the membrane. In the second case, it is preceded by a state of general soreness and suffering, which does not admit of the application of foreign bodies, or the performance of the usual motions which the membrane may undergo in the state of health without producing uneasiness. The latter state is denominated irritation, into the doctrine of which our author enters very fully.

Dr. C. adopts the terminations in *ia* instead of those in *itis*, to distinguish inflammation. Thus we find bronchia for bronchitis, gasteria for gastric catarrh, ureteria for inflammation of the ureter, urethria for gonorrhœa, colonia for dysentery. It is much to be regretted, that one nomenclature cannot be adhered to, and universally employed.

We pass over ophthalmia, coryza, otitis, tympanitis, and aphtha, and come to angina diffusa or gangrenosa. This is the sore throat that in general accompanies scarlet fever, but which sometimes occurs as a distinct disease. The next described disease is croup. Upon this subject our author has little that is novel. We are in the habit of considering that true croup is always fatal; if it is not fatal, it is not croup. Our author informs us that the disease may terminate favourably in three days.

> "*First.* After the symptoms have attained a considerable height, they gradually recede. The pulse becomes fuller and softer, generally less frequent, though this is not so conspicuous; the skin becomes moist, the cough loose, and the breathing easy, and the voice gradually recovers its natural tone. *Secondly.* After the disease has continued a few days, a white viscid tubular substance, of the consistence of membrane, and hence termed the membrane of croup, is expectorated, and the child is relieved. The discharge of this substance, however, produces in general, a mere remission of the symptoms, and does not affect the course of the disease. *Thirdly.* Croup may be a more chronic affection, and not subside for several weeks, when the resolution is gradual; the child expectorating puriform mucus freely, and now and then membranous films."

Dr. C. distinguishes cynanche laryngea, which he says is still confounded by many writers, both in Great Britain and elsewhere, with croup. Dr. Good and others made this distinction long ago, and we believe it has been pretty generally adopted.

Chronic catarrh or bronchitis is described by our author as the most frequent of pulmonary complaints; and he says that it may be considered as certain that in the greater number of consumptive cases, chronic inflammation of the bronchial membrane is either the principal or the only pathological action. He quotes Rush as his authority for the prevalence of the complaint in America generally. But upon this subject, the authority of Rush must be considered obsolete. Fatal cases of chronic bronchitis we believe are very rare, and post-mortem examinations show the existence of tubercles in the lungs of all, or nearly all of those who die from consumption. Dr. Craigie describes another variety of bronchial inflammation, chiefly distinguished by the nature of the exciting cause.

> "Foreign bodies, such as teeth, natural or artificial, pieces of metal, wood or bones, which pass the glottis and drop into the windpipe, if they do not produce immediate suffocation, cause irritation of the windpipe, *bronchi*, and bronchial membrane, indicated by fits of coughing, more or less continued and severe, wheezing, breathlessness, and weight and oppression in the chest."
>
> "2dly. These symptoms of irritation are speedily succeeded by symptoms of inflammation, sometimes acute, sometimes chronic, but always afterwards becoming chronic, indicated by cough, expectoration of dense puriform or purulent mucus, occasionally streaked with blood; weight and anxiety in the chest, quick pulse and eventually hectic fever with wasting."
>
> "3dly. These bodies, there is reason to believe from their size and shape, must be arrested in the larger or middle sized bronchial tubes; and it must be anatomically and physically impossible for them to descend into the smaller tubes or the pulmonary vesicles."
>
> "4thly. In all the recorded cases, the symptoms, however intense during the abode of the body in the *bronchi*, and though enduring for the space of from six to seven weeks, as in the cases of Borsieri, Dr. Donaldson, and Dr. J. Scott, to that of several months, as in the case by Dr. Lettsom, that of Dr. Nooth, and the case by Mr. Howship, rapidly subsided as soon as the foreign body was ejected."

On the whole, our author seems to be more of a conservative than a reformer in medicine. We find that his references and his bibliographical lists contain the names chiefly of those whom time has rendered venerable or at least has confirmed and sanctioned, while more recent medical literature is treated with neglect. Our readers must not, therefore, resort to the work with the expectation of finding much novelty. It is valuable as a compilation, drawn from the best established sources, in which the reader will find the various opinions and observations of authors of reputation drawn into small compass, and as far as possible reconciled. The task our author has attempted is no easy one, and one which he could not be expected to accomplish in an altogether faultless manner. At least it cannot be expected that any general treatise on medicine in which the author expresses his own opinions, or attempts to reconcile those of others by his own judgment and experience, will not contain many errors and omissions in the eyes of those whose opinions differ from his. Dr. Craigie, as this work testifies, is well qualified from his sound judgment, learning, and research, to execute such an undertaking, and we consider his treatise a very valuable one both to the student and the medical practitioner.

E. W.